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| 10/825,216      | 04/16/2004  | John Amico           | 32798-2003          | 7252             |

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| EXAMINER |
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AZARIAN, SEYED H

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2624

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 03/15/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/825,216

Applicant(s)

AMICO ET AL.

Examiner

Seyed Azarian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 57-101 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 57-101 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **RESPONSE TO AMENDMENT**

1. Applicants' amendment filed, 1/25/2007, see page 26 through page 28, of remark, with respect to withdrawn of claims 4-56 and amended claims 1-3, 57-59, 62-64, 67-69 and 72-74 and added new claims 75-101, have been fully considered but they are moot in view of the new ground (s) of rejection as necessitated by applicant's amendment is made.

Applicant's argues in essence regarding claim 1, that Ishikawa does not teach, "identifying at least one notch of the at least one outline wherein said notch is identified by determining a plurality of curvatures, wherein each of the plurality of curvatures is in a neighborhood of a point on the at least one outline".

Contrary to the applicant's assertion, Ishikawa clearly states, (column 2, line 60 through column 3, line 27, the single most important information about the pattern is its outline (108). Other important features include lines and curves drawn on the pattern (109), which we call internal curves hereafter. Both the outline and the internal curves appear in the raster image as curves. Therefore, it recognizes curves in the raster image. There is more than one connective algorithm to detect and recognize curves. Such as an algorithm finds characteristic pixels in the raster image that are positioned like a curve, also a pixel on the outline of the pattern is characterized as a boundary of two colors (refer to plurality). Further it comprises the representation of curves that constitute the outline and the internal curves. The presentation is such that coordinates of successive points (page 44 of embodiment, line 22, a digitized notch can have the

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same structural qualities as a point but has the added ability to represent a notch), on the curves can be readily calculated.

The Applicant is respectfully reminded that the rejection of the claim is a combination of two reference, also Bankart, in the same field of pattern scanning providing data to a computer which carries out lay planning, which teaches (see abstract, identifying information such as grain direction, piece identity and drill holes, further column 9, lines 27-39, it is possible electronically to identify scanned pattern pieces, and also holes, grain arrows, ID's, notches and grading points within the pattern pieces.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ishikawa invention that digitizes pattern shapes, receiving at least one data representing at least one shape where the outline has a curvature, identifying at least one corner by calculating the curvature of the outline in the neighborhood of a point on the outline and determining whether the curvature is at least a pre-defined minimum value according to the teaching of Bankart because it provides identifying one of a group of pattern elements including notches, grain lines for a more accurate and efficient method and process for digitizing shapes and patterns by image scanning techniques.

In response to Applicant's argument that in claim 2 and 73, the Bankart reference fails to show "identifying at least one notch of the at least one outline wherein said notch is identified by determining a plurality of curvatures, wherein each of the

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plurality of curvatures is in a neighborhood of a point on the at least one outline". The same response above.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 3, 57, 58, 62, 63, 67, 68, 75, 76, 77, 78, 82 and 86 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. For example in claim 3, recite "fourth module" and claims 57 and 58 recite "at least three curvatures include a first curvature that is directed leftward, a second curvature that is directed rightward, and a third curvature that is directed leftward". There is no disclosure in the specification as originally filed of "at least three curvatures include a first curvature that is directed leftward, a second curvature that is directed rightward, and a third curvature that is directed leftward" or how to perform it.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 and 57-101, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (U.S. patent 7,031,527) in view of Bankart et al (U.S. patent 4,575,628).

The subject matter claimed in the current application is fully disclosed in the patent (U.S. patent 7,031,527) and is covered by patent since the patent and application are claiming common subject matter, and does not make the claims patentably distinct from previous patent 7,031,527, because regarding claim 1, Ishikawa discloses a method of digitizing shapes, said method comprising (column 10, lines 19-20);

receiving at least one data representing at least one shape identifying at least one outline of the at least one shape in the at least one data, wherein the outline has a curvature (column 10, lines 21-24);

and identifying at least one corner of the at least one outline wherein said corner is identified by calculating the curvature of the outline in a neighborhood of a point on the outline and determining whether the curvature is at least a pre-defined minimum value (column 10, lines 25-29).

Although all of the features of the current claims of application are covered in the patented application.

However regarding limitations in the amended claims of 1, 2, and 3, applicant argues that Ishikawa does not explicitly state its corresponding "identifying at least one notch of the at least one outline wherein said notch is identified by determining a

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plurality of curvatures, wherein each of the plurality of curvatures is in a neighborhood of a point on the at least one outline" (Ishikawa clearly discloses column 2, line 60 through column 3, line 27, the single most important information about the pattern is its outline (108). Other important features include lines and curves drawn on the pattern (109), which we call internal curves hereafter. Both the outline and the internal curves appear in the raster image as curves. Therefore, it recognizes curves in the raster image. There is more than one connective algorithm to detect and recognize curves. Such as an algorithm finds characteristic pixels in the raster image that are positioned like a curve, also a pixel on the outline of the pattern is characterized as a boundary of two colors (refer to plurality, also, page 44 of embodiment, line 22, a digitized notch can have the same structural qualities as a point but has the added ability to represent a notch), on the curves can be readily calculated. On other hand Examiner is using the reference Bankart supplied with this action, in the same field of pattern scanning providing data to a computer which carries out lay planning, which teaches (see abstract, identifying information such as grain direction, piece identity and drill holes, further column 9, lines 27-39, it is possible electronically to identify scanned pattern pieces, and also holes, grain arrows, ID's, notches and grading points within the pattern pieces.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ishikawa invention that digitizes pattern shapes, receiving at least one data representing at least one shape where the outline has a curvature, identifying at least one corner by calculating the curvature of the outline in the neighborhood of a point on the outline and determining whether the curvature is at least

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a pre-defined minimum value according to the teaching of Bankart because it provides identifying one of a group of pattern elements including notches, grain lines for a more accurate and efficient method and process for digitizing shapes and patterns by image scanning techniques.

The other claims of current application has similar correspondence to claims of patent application.

Regarding claim 2, Ishikawa discloses a system for digitizing shapes, said system comprising: a memory arrangement including thereon a computer program, and a processing arrangement which, when executing the computer program is configured to: receive at least one data representing at least one shape, identify at least one outline of the at least one shape in the at least one data, wherein the outline has a curvature, and identify at least one corner having a relatively large average curvature of the at least one outline wherein said corner is identified by calculating the curvature of the outline in a neighborhood of a point on the outline and determining whether the curvature is at least a pre-defined minimum value (see claim 1, also column 10, lines 30-44).

Regarding claim 3, Ishikawa discloses Software stored in a computer-readable storage medium which, when executed by a processing arrangement, is configured to digitize shapes, said software storage medium comprising: a software program including: a first module which, when executed, receives at least one data representing at least one shape, a second module which, when executed, identifies at least one outline of the at least one shape in the at least one data, wherein the outline has a



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curvature, and a third module which, when executed, identifies at least one corner having a relatively large average curvature of the at least one outline wherein said corner is identified by calculating the curvature of the outline in a neighborhood of a point on the outline and determining whether the curvature is at least a pre-defined minimum value (see claim 1, also column 10, lines 46-60).

Regarding claim 57, Ishikawa discloses the method of claim 1, wherein the plurality of curvatures comprises at least three curvatures identifying the at least one corner includes determining whether a point on the outline has the largest curvature in a neighborhood of a point (Fig. 1, column 2, line 63 through column 3, line 15). Other important features include lines and curves drawn on the pattern (109), which we call internal curves hereafter. Both the outline and the internal curves appear in the raster image as curves (plurality curvature). Therefore, it recognizes curves in the raster image. There is more than one connective algorithm to detect and recognize curves.

Regarding claim 58, Ishikawa discloses the method of claim 57, wherein the at least three curvatures include a first curvature that is directed leftward, a second curvature that is directed rightward, and a third curvature that is directed leftward (Fig. 12 column 9, lines 35-55, shows a flow chart of the subroutine Find-Corners. It is called with a reference ctr to a contour record. The subroutine finds points that have the largest absolute curvature in their respective neighborhoods and have at least a predefined minimum absolute curvature. An outer loop (controlled by initialize-step 1201, increment-step 1211, and exit-test-step 1212) of index  $i$  runs from 0 to size (ctr)-1 (refer to leftward)). For each pixel record in the contour, first the corner field is set to

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false (1202). Then the absolute curvature (absolute value of the curvature) at the point is examined (1203) and if it is not larger than the minimum curvature for a corner, which is stored in a global variable MinC, the loop continues (refer to right ward)). Here, the value of  $\pi/8$  or 0.3927 is given for MinC. If it does have a larger absolute curvature than MinC, the maximum absolute curvature in the neighborhood of the record is examined using an inner loop (controlled by initialize-step 1205, increment-step 1207, and exit-test-step 1208). A real-number variable M is initialized to 0 (1204) and updated for each record in the neighborhood (1206). If it turns out that the original point has the maximum absolute curvature in its neighborhood (1209), the field corner is given the value true (1210)).

Regarding claim 59, Ishikawa discloses the method of claim 8, wherein the at least one notch is represented by a series of point coordinates (column 2, line 60 through column 3, line 27, the single most important information about the pattern is its outline. Other important features include lines and curves drawn on the pattern (109), which we call internal curves hereafter. Both the outline and the internal curves appear in the raster image as curves. Further it comprises the representation of curves that constitute the outline and the internal curves. The presentation is such that coordinates of successive points (page 44 of embodiment, line 22, a digitized notch can have the same structural qualities as a point but has the added ability to represent a notch), on the curves can be readily calculated, also column 2, lines 45-49, refer to point coordinates).

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Regarding claim 60, Ishikawa discloses the method of claim 72, wherein said digitized shape corresponds to the shape of a pattern for producing sewn goods (column 11, lines 3-5, producing sewn goods).

Regarding claim 61, Ishikawa discloses the method of claim 72, wherein said digitized shape corresponds to the shape of a garment pattern (column 2, lines 19-24, the present invention related to automatically digitization of garment and shape).

Regarding claim 80, Ishikawa discloses the method according to claim 72, wherein the at least one notch is further identified by a minimum depth ((Fig. 12 column 9, lines 35-55, shows a flow chart of the subroutine Find-Corners. The subroutine finds points (notch) that have the largest absolute curvature in their respective neighborhoods and have at least a predefined minimum absolute curvature. Then the absolute curvature (absolute value of the curvature) at the point (notch) is examined (1203) and if it is not larger than the minimum curvature for a corner).

Regarding claim 81, Ishikawa discloses the method according to claim 72, wherein the at least one notch is further identified by a maximum depth (Fig. 12 column 9, lines 35-55, shows a flow chart of the subroutine Find-Corners. Then the absolute curvature (absolute value of the curvature) at the point (notch) is examined and if it is not larger than the minimum curvature for a corner, which is stored in a global variable MinC, the maximum absolute curvature in the neighborhood of the record is examined using an inner loop (controlled by initialize-step 1205, increment-step 1207, and exit-test-step 1208).

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Regarding claims 64, 65 and 66, it recites similar limitation as claims 57, 58, 59, 60 and 61, are similarly analyzed.

Regarding claims 69, 70 and 71, it recites similar limitation as claims 1, 3, 58-61, are similarly analyzed.

Regarding claims 72, 73 and 74, it recites similar limitation as claims 1, 2 and 3, are similarly analyzed.

Regarding claims 75, 79, it recites similar limitation as claims 1, 58, 59 and 81, are similarly analyzed.

Regarding claims 82-85, 87-89, it recites similar limitation as claims 57, 58, 59, 60 and 61, are similarly analyzed.

Regarding claims 90-101, it recites similar limitation as claims 1, 3, 57, 58, 59, 60 61 and 81, are similarly analyzed.

Regarding claims 62, 63, 67, 68, it recites similar limitation as claims 57, 58, 59, 60 and 61, are similarly analyzed.

Regarding claims 76, 77, 78 and 86, it recites similar limitation as claims 57, 58, 59, 60 and 61, are similarly analyzed.

### **Contact Information**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (571) 272-7443. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

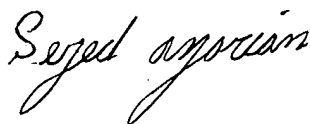
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.

Status information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Seyed Azarian  
Patent Examiner  
Group Art Unit 2624  
March 12, 2007

A handwritten signature in cursive script that reads "Seyed azarian".